Burlington Northern Somers Tie Plant Superfund Site, Somers, Montana

FINAL PROJECT REPORT
Grant I.D. #1-008573-01

submitted to:
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I. INTRODUCTION

The Flathead Lake Protection Association (FLPA) received a technical assistance grant for oversight of remediation activities at the Burlington Northern Somers Tie Plant in Flathead County, Montana December 27, 1988. The association is composed of private citizens who live near the tie plant or utilize Flathead Lake water for domestic supply and recreation or who are deeply concern about maintaining or improving the water quality of Flathead Lake.

The FLPA was incorporated in May, 1981, to address water quality issues related to Flathead Lake and its shoreline. The association is incorporated to prevent contamination of the waters of Flathead Lake and to provide water quality educational opportunities to the public, especially those affected by the lakes' water quality. The association has operated as a non-profit organization for 13 years with an administration structure that provides oversight and guidance for their activities. The organization is managed by a three member executive committee composed of the president, vice-president and secretary/treasurer.

Site remediation will continue well past 1994, due to additional groundwater pilot studies associated with bioremediation of contaminated groundwater and soils on the site. The ROD states that groundwater pilot testing is required so that "EPA may determine the practicability, design and operational constraints of the process".

Due to changes in CERCLA, a demonstration of no migration was required prior to implementation of the selected land treatment alternative. This occurred during 1991.

Due to low permeability of contaminated soils and aquifers, cleanup of contaminated groundwater and aquifer materials is expected to be a slow process and unpredictable due to highly variable geologic characteristics within the saturated formation.

The FLPA, founded in 1981, has 120 members. At least 50 of the groups members live within three miles of the site which was added to the National Priorities List (NPL) in 1984. The remainder of the group lives in the Flathead Basin, the majority live on or near Flathead Lake. Group members utilize the lake for drinking water supplies and various recreational pursuits. The association, since formation, has focused their efforts on improving the water quality of Flathead Lake. Recognizing a lack of understanding and persistent concern about potential health and water quality issues related to the site, the association has focused their attention on the effects of contamination from the Somers Tie Plant site on adjacent land and water ecosystems.

II. PROJECT GOALS AND OBJECTIVES

Public Information - Informing Others in the Community

As a means of keeping community members informed of activities at the Burlington Northern Somers Tie Plant Site, the FLPA encouraged the formation of a Somers Citizen Coordinating Committee to specifically address the concerns of residents living next to and near the site. The Technical Advisor regularly meets with the Committee and provides copies of reports prepared by the Advisor to the committee and assists the Committee with preparation of their comments. All final documents produced by technical advisors will be sent to EPA to be placed in the information repositories established for the site at locations accessible to interested community members (i.e. Flathead County Library).

To encourage community involvement in activities related to the site, the FLPA will make all of its general, monthly meetings open to the public and will not require membership of attendees. FLPA will hold community forums during the cleanup process as deemed necessary by the Association particularly if EPA and State public meetings appear to be unsuccessful at addressing community concerns.

5. Economic and Environmental Issues

FLPA members have actively utilized Flathead Lake for decades as a source of drinking water and recreational activities. During the past twenty years, increased contamination of the lake has degraded it use for recreational purposes. Pollution from the Burlington Northern Somers Tie Plant is suspected of contributing significantly to the degradation of Flathead Lake. The FLPA wants the Burlington Northern Tie Plant Site cleaned up so that the pollution caused by it will no longer degrade Flathead Lake.

Serious economic concerns face many members of the FLPA. Members of the group are concerned that publicity about the contamination from the tie plant may cause property values of homes obtaining drinking water from the lake or groundwater near the Burlington Northern Somers Tie Plant Site to decrease significantly. Fish populations and fishing use of the lake have declined, while the cause is unknown, degraded water quality is suspected. Fishing on Flathead Lake contributes significantly to the local economy through boat rentals, trailer space rentals, tackle purchases and various support activities. FLPA members support a timely cleanup of the Burlington Northern Somers Time Plant Site before the effects of site contamination drive away potential buyers, significantly lower property values, and scare away vacationers. FLPA members have experienced financial burdens from not being able to use their tap water. A significant investment has been made to develop an alternative water supply which FLPA members which to protect. The new wells are within one-half mile of the Burlington Northern Somers Tie Plant Site.

III. ACTIVITIES UNDERTAKEN TO ACHIEVE GOALS AND OBJECTIVES

Remedial Investigation / Feasibility Study

The Work Plan for the Burlington Northern Somers Tie Plant Site combined the RI/FS into a single phase.

The Technical advisor reviewed reports prepared as part of the RI/FS. Comments prepared by the TA were utilized by FLPA in responses to EPA and the public. The Technical Advisor regularly met with the Committee and provided copies of reports prepared by the Advisor to the committee and assisted the Committee with preparation of their comments. FLPA individual members and through their TA provided site information to the public as requested.

The FLPA was concerned that adequate sampling be carried out including an assessment of the need for testing in areas not included in the RI/FS Work Plan. In response to comments by FLPA and members of the Coordinating Committee additional area were sampled and soil cleanup was expanded. Special attention was given to the groundwater modeling and how, where and how fast contaminants are moving from the site into the groundwater systems and hence, into Flathead Lake. From EPA's evaluation, the advisor prepared information for FLPA's leadership so that this information could be relayed to the membership and concerned citizens.

The advisor completed an analysis of the proposed remedies in the draft RI/FS study. Results of the advisor's analysis were provided to the FLPA leadership in a memo and presented at a briefing of FLPA membership. The advisor attended EPA's public meeting held in Somers during the public comment period. As a result of FLPA's partic-

ipation in this process as well as comments from the public, the proposed soil treatment method was changed to landfarming and proposed disturbance of Flathead Lake beach was eliminated. These changes resulted in a reduction of estimated remediation costs from $64 million to approximately $12 million.

FLPA was concerned about health and ecological effects of the contamination on the Burlington Northern Somers Tie Plant Site. Consequently, characterization of the contaminants, definition of the plume, and the projected path of the plume were considered to be extremely important. The potential for contaminants to migrate from the Site to the Somers Municipal Wells was carefully examined. A summary report on the groundwater regime at the site was prepared and provided to EPA and interested persons.

The ROD was reviewed and comments prepared. These comments were discussed at length by the FLPA Executive Committed and provided to EPA.

Remedial Design

FLPA through their technical advisor carried out oversight functions during this stage. Preliminary and final design and associated work plans were reviewed to ensure that the design was consistent with the record of decision (ROD). Comments were submitted to the FLPA's executive committee and EPA. As appropriate, the FLPA membership was briefed at regular meetings regarding the RD and how it met FLPA's concerns.
Pilot and demonstration studies continued through the RD phase and were reviewed and commented on by the TA.

Remedial Action

During remedial action, the advisor made site inspections at various times during site cleanup. Inspections generally occurred during key events related to pilot studies and construction activities. Cleanup of the site is far from complete with groundwater remediation projected to continue for as much as 50 years. Soil remediation may last for 15 or more years. In order to enhance community understanding several educational tours were conducted of the site during RA activities.

Chronology of Activities Conducted by Members of the Flathead Lake Protection Association Regarding the Burlington Northern Somers Tie Plant Site

A. Flathead Lake Protection Association Activities

1984 - FLPA members become aware of problem in response to the listing of the Burlington Northern Somers Tie Plant Site on the National Priorities List.

1985 - FLPA members review site activities and progress. members observe contamination on adjoining marshes.

1986 - FLPA members feel site cleanup is inadequate and start photo series of problem areas. Organization members hold meeting to discuss at length the Burlington Northern Somers Tie Plant Site.

1987 - FLPA members attend MEIC/BN public meetings. Group members became concerned that contamination problems were not being satisfactorily addressed and that local community interest was low. In December, 1987, FLPA members receive bottled water due to potential contamination of distribution system by a main rupture.

1988 - FLPA members recognized need of increased public participation and contacts EPA for information on the Technical Assistance Grant Program.

1988 - December, 1988, FLPA receives TAG.

1989 - Somers Citizen Coordinating Committee formed with assistance and encouragement from FLPA.

1990 - Detailed pump tests performed on new Somers municipal wells to assess potential contamination hazard of Somers water supply.

1990 - Land ban takes effect, demonstration of no migration required for land treatment units.

1990 - FLPA and Citizen Coordinating Committee (CCC) encourage EPA to utilize remediation methods other than incineration and to not disturb beach sediments.

1991 - April, Consent Decree Released for Public Comment.

1991 - May, Remediation started with demolition of buildings and initiation of pilot studies.

1992 - Site removed from proposed National Priority List.

1992 - October, Land Treatment Facility construction begun. Irrigation system design modified through CCC suggestions.

1993 - August, First layer of soil spread on LTF.

1993 - Groundwater remedy test facility begun.

IV. DIFFICULTIES ENCOUNTERED

April - June, 1989

- Due to public resistance to off site treatment alternative, an extension of the comment period was sought and granted.

April - June, 1991

- Contaminated monitoring well #85-1b was removed by ReTec without notice or discussion.

V. TECHNICAL ADVISOR WORK PRODUCTS

July - Sept., 1989

- Spratt & Associates, July 16, 1989, Description of FS alternatives and principal related issues.
- Flathead lake Protection Association, July 20, 1989, Statement to Concerned Citizens.
- Flathead Lake Protection Association, August 2, 1989, RI/FS comments to EPA.
- Daily InterLake, 8-20-89.

October - December, 1989

- Spratt & Associates, October 11, 1989, Pump Test Review, including comments for improvement of proposed test and assessment of potential leakage from Somers BN Tie Plant contaminated soils and groundwater to new town wells.

January - March, 1990

- Spratt & Associates, January 11, 1990, Review of Record of Decision, Draft Statement of Work, Draft Consent Decree, Flathead Lake Protection Association, Lakeside, Montana, 27 p.
- Comments regarding amending the ROD submitted to EPA, Letter dated January 29, 1990, Flathead lake Protection Association, Lakeside, Montana, 2 p.

April - June, 1990

- FLPA, June 7, 1990, Review and Analysis of Somers Municipal Well Pump Test Report and Data, Spratt & Associates and Dr. Garry Grimestad, 21 p.
- Spratt & Associates, June 28, 1990, Memo: Hydrologic evaluation of Somers Municipal Well Tests, 3-13-90, 12 p.

July - September, 1990

- FLPA, July 9, 1990, Comments on draft documents, RD/RA, Spratt & Associates, Kalispell, Montana, 4 p.

- FLPA, July 11, 1990, Comments on draft documents, RD/RA, Spratt & Associates, Kalispell, Montana, 2 p.

October - December, 1990

- FLPA, November 7, 1990, Review Comments, Yacht Club Pump Test Analysis, October, 1990, Spratt & Associates, Kalispell, Montana, 7 p.

April - June, 1991

- Consent Decree comments (April).
- Status report, site activity summary (April).
- Work Plan and Consent Decree comments (May).
- Deep well contamination report (May).
- Bigfork Eagle interview (June).

July - September, 1991

- Groundwater Monitoring Plan for the Somers BN Tie Plant Site, July 26, 1991 Comments, August 3, 1991, Spratt & Associates, Kalispell, Montana, 3 p.

October - December, 1991

- Quarterly Report.
- Anticipated Expenditure Report.

January - March, 1992

- Quarterly Report.
- Comments on:
  1) 50% Complete Report (1/28/92).
  2) Technical Report & Appendices (2/6/92).
  3) Reviewer comments (4/2/92).

April - June, 1992

- ReTec Technical Report Comment Response Review, Spratt & Associates, April 2, 1992, Kalispell, Montana, 4 p.
- On-site Inspection Report, Spratt & Associates, May 4, 1992, Kalispell, Montana, 3 p.

January - March, 1993

- Comments - Somers Soil Remedy Excavation Pre-final Remedial Design Report and Construction Plan, Spratt & Associates, February 19, 1993, Kalispell, Montana, 2 p.

January - March, 1994

- FSDWAC Article (both the short and long version)

July - September, 1994

- Tour presentation, July 19, 1994 - in cooperation with ReTec, provided a comprehensive tour of the site to the Flathead Laker interns.

VI. FUNDS SPENT

Technical Advisor Time to Complete Project	Estimated	Actual
Remedial Investigation / Feasibility Study	318 hrs.	355.80 hrs.
Remedial Design	48	373.75
Remedial Action	486	56
Total Hours	852	785.55

A. Federal share (9/30/94)	$46,978.97
B. Matching share (9/30/94)	$20,152.43
1. Cash	$58,634.95
2. In-Kind Contributions	$8,496.45

VII. CONCLUSION

Actions by the committee and FLPA caused notable changes in the remediation design. Initial off site treatment alternatives were discontinued and only on-site treatment alternatives were considered due to public and committee actions. Proposals to clean up subsurface contaminated beach sediments were changed when it became clear that disturbing the existing beach sediments would likely cause greater contamination of Flathead Lake than was already occurring. Soil incineration alternatives were replaced with biological treatment methods due to the prevalence of inversions and potential air quality problems. The Land Treatment Facility irrigation design was modified by Committee recommendations due to irrigation experience by committee members. Committee meetings facilitated coordination between remediation contractors and the local water district, volunteer fire department, sewer district (community water and sewer systems were constructed during remediation planning and execution) and the school district. The committee was able to bring potential off site contamination issues to the attention of the EPA and owner. The town of Somers constructed two water supply wells adjacent to the site that might be affected by contamination emanating from the site. Through actions by the committee and water and sewer district, a monitoring program was established to

protect the Somers water supply. Heavy truck traffic was rerouted to minimize damage to area roads and conflicts with local traffic patterns. To minimize the visual impact on the community by the ongoing cleanup process, vegetative screening was implemented in strategic areas.

The site is, and has been, an integral part of the community. Cleanup methods and time frames have evolved during a long process that has taxed the public's patience and similarly the public's faith in the owner and regulatory agencies. Due to the nature of the contaminants and the contaminated materials, cleanup will be slow though it appears feasible. The TAG has been a beneficial mechanism to obtain public comment, adjust remediation designs to local soil and weather conditions, and address ancillary treatment issues that reduce the impact of the site on local lifestyles.